



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,865	01/18/2001	Shizuo Hattori	208753	1162

23460 7590 04/09/2003

LEYDIG VOIT & MAYER, LTD
TWO PRUDENTIAL PLAZA, SUITE 4900
180 NORTH STETSON AVENUE
CHICAGO, IL 60601-6780

EXAMINER

LOEB, BRONWEN

ART UNIT PAPER NUMBER

1636

DATE MAILED: 04/09/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/765,865

Applicant(s)

HATTORI ET AL.

Examiner

Bronwen M. Loeb

Art Unit

1636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: *Revised Notice re: Amendments*.

DETAILED ACTION

Claims 1-6 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 16 December 2002 has been entered.

Response to Amendment

2. The rejection of claims 1-6 under 35 USC §112, second paragraph as being indefinite has been withdrawn in view of Applicant's amendment.
3. Claims 1-6 stand rejected under 35 USC §103(a) as being unpatentable over Takeshima et al (JP 11-243949) in view of Cameron et al (USP 5,670,343) for reasons of record and as further discussed below.

Response to Arguments

4. With regard to the rejection of claims 1-6 under 35 USC §103(a) as being unpatentable over Takeshima et al in view of Cameron et al, Applicant's arguments have been fully considered but are deemed not persuasive.

Based on the abstract in English (provided by Applicant in their IDS) and Applicant's statements in the specification (p. 3, lines 7-17), Takeshima et al teach a broad-host-range vector (pGLD3) comprising a gene for glucose dehydrogenase wherein the gene can be and is expressed in *Pseudomonas*. pGLD3 belongs to the incompatibility group P-4, as it is based on R1b679. Takeshima et al do not teach a vector wherein the conjugative transfer function (encoded by *mob*) is defective.

At the time the invention was filed, it would have been obvious to one of ordinary skill in the art to make pGLD3 a non-mobilizable vector by mutating or deleting the conjugative transfer function. One of ordinary skill in the art would have been motivated to do so because biosafety constraints dictate non-conjugative and nonmobilizable plasmids for use in *E. coli* and *Pseudomonas* to prevent transmission to other organisms in the event of accidental release of the transformed organism into the natural environment, and means to achieve nonmobilizable plasmids are taught in Cameron et al. See entire document, especially col. 1, lines 52-60, col. 3, lines 54-64, col. 4, line 27- col. 5, line 4, col. 5, line 49- col. 6, line 7 and the Table in col. 12.

Applicant argues that the plasmids of the Takeshima and Cameron references exhibit conjugative transfer functions if other plasmids are in the same environment which contain the *tra* or *mob* loci, respectively and that therefore, one of ordinary skill in

Art Unit: 1636

the art would not have been motivated to combine the two references. This argument is not persuasive. The instant specification teaches that the plasmid taught by Takeshima et al lacks the tra gene but comprises the mob gene (p. 3, lines 26-29). Cameron et al teach that the mob locus may be mutated or deleted in order to disable the mobility function, and also teach that for biosafety reasons, plasmids that are both non-conjugative and non-mobilizable are preferred. Applicant's attention is drawn again to col. 3, lines 54-64 of Cameron et al. Therefore, one of ordinary skill in the art would be motivated to generate a plasmid that is both non-conjugative and non-mobilizable because such plasmids are the most preferred for biosafety reasons. These teachings are combined with Takeshima to yield the claimed invention, a plasmid that is both non-conjugative and non-mobilizable by mutating or deleting the mob locus in Takeshima's pGLD plasmid, the encodes for an enzyme that used PQQ.

Conclusion

Claims 1-6 are rejected.

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued

Art Unit: 1636

examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Certain papers related to this application may be submitted to Art Unit 1636 by facsimile transmission. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 C.F.R. § 1.6(d)). The official fax telephone numbers for the Group are (703) 308-4242 and (703) 305-3014. NOTE: If Applicant does submit a paper by fax, the original signed copy should be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED so as to avoid the processing of duplicate papers in the Office.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bronwen M. Loeb whose telephone number is (703) 605-1197. The examiner can normally be reached on Monday through Friday, from 11:00 AM to 7:30 PM. A phone message left at this number will be responded to as soon as possible (usually no later than the next business day after receipt by the examiner).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Remy Yucel, can be reached on (703) 305-1998.


The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4242.

Art Unit: 1636

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Bronwen M. Loeb, Ph.D.
Patent Examiner
Art Unit 1636

April 3, 2003



JAMES KETTER
PRIMARY EXAMINER